DOCUMENT RESUME

ED 217 756 HE 015 106

AUTHOR	Froomkin, Joseph
TITLE	Critical Policy Questions in Postsecondary Education Finance.
INSTITUTION	Froomkin (Joseph) Inc., Washington, D.C.
SPONS AGENCY	National Inst. of Education (ED), Washington, DC.
PUB DATE	28 Jan 81
NOTE	34p.; Order Number: NIE-P-81-0024.
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	College Graduates; Databases; *Declining Enrollment; *Educational Finance; Educational Policy; *Educational Research; Education Work Relationship; Employment Opportunities; Enrollment Influences; Graduate Students; Institutional Research; *Postsecondary Education; *Public Policy; Research Methodology; Resource Allocation; State Aid; Trend Analysis; Tuition; Undergraduate Students
IDENTIFIERS	National Institute of Education

ABSTRACT

A strategy to establish a research agenda and critical policy questions in postsecondary education finance are considered. Three steps in preparing agendas are the development of a statistical or factual overview of recent developments, the review of appropriate approaches and their relevance to the issues to be researched, and consideration of the availability and limitations of current databases. The following developments and concerns are addressed: the market for college graduates, the impact of future job prospects on enrollment, the effect of tuition levels on enrollment, and rates of return on education. It is suggested that some idea of future conditions in the job market is essential to formulating a realistic hypothesis about the propensity of students to enroll, and that anticipated earnings are not the sole determinant of reasons why students enroll. The opportunity to compete for better jobs, not necessarily better paid, may also be a powerful incentive. Attention is directed to rates of return calculations, state appropriations for postsecondary education, the allocation of state support between institutions, managing declining enrollments, and institutional finances. It is suggested that studies of financial concerns be integrated with broader-based studies of the functions of institutions. Attention should be directed to a shift in majors chosen by undergraduates, declining graduate enrollments in the leading research universities, and lack of growth in real terms of outlays for research and development. In view of limited funds, approaches that the National Institute of Education might take are noted. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

JOSEPH FROOMKIN INC.
1730 K STREET, N.W., WASHINGTON, D.C. 20006

ED217756

CRITICAL POLICY QUESTIONS IN POSTSECONDARY EDUCATION FINANCE

By

Joseph Froomkin

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Order No. NIE-P-81-0024

January 28, 1981

HE 015 106

TABLE OF CONTENTS

INTRODUCTION	1
STRATEGY TO ESTABLISH A RESEARCH AGENDA	2
Detailed Review of Developments	3
Choice of Appropriate Techniques	3
Examination of Data Bases	4
An Iterative Approach to Agendas	6
SHAPING THE AGENDA IN THE LIGHT OF FUTURE DEVELOPMENTS	8
The Market for College Graduates	9
The Impact of Future Jobs Prospects on Enrollment	12
The Effect of Tuition Levels on Enrollment	17
Rates of Return on Education	18
The States and Education	19
Student Support	19
Support of Institutions	20
Managing Decline	21
INSTITUTIONAL FINANCES	22
Study of a System	22
Record-Keeping and Management	23
Financial Implications of Change on Institutions	24
THE IMPACT OF STABILITY OR DECLINE ON FACULTIES	27
CONCLUSION	28
FOOTNOTES	31

INTRODUCTION

There is no more flattering invitation to a researcher than to pinpoint gaps in other people's research agendas. Most of us are gifted with 20/20 hindsight and superb critical faculties, and thus have no difficulty finding fault. The more honest among us use these occasions to bare their souls, and try to critique some of their own work as well.

Will such gnashing of teeth and rending of clothes contribute to the development of a better research agenda for NIE? I doubt it. At some time or other, most researchers have written papers on trivial topics; many of us have submitted reports based on faulty or incomplete data; and some of us have been insensitive to the desires of funding agencies and have continued to do what we like doing, rather than what was asked of us.

Part of the fault lies with us, and part of it is with the federal funding agencies' agendas and review panels. The quality of the research and of the research topics are very much the responsibility of the sponsoring federal agencies, which ought to share both the glory and the blame for sins of both omission and commission.

I do not subscribe to the devil theory of research, which implies that both the sponsoring agencies and the researchers form a dishonest cabal, which functions to channel taxpayers' moneys to a group of entrenched and not-so-wise

scientists. These failures are due to the methods of selection of topics for directed research, and to the serious shortcomings in the way awards are handed out.

STRATEGY TO ESTABLISH A RESEARCH AGENDA

Let me now turn to the process of establishing research agendas and suggest an alternative process to the current patterns which might result in better agendas. If my impression is correct, most research agendas are developed in an Aristotelean setting.

A group of civil servants, who have informed themselves by perusing the literature and consulting both their present grantees and a few others, meet to discuss what is likely to be included in the agenda. They come to these meetings fortified by a series of guidelines or concerns which are generally called priorities. In the past few years, the higher education concerns were easily encapsulated by a few words--minorities, women, middle-income students. More recently, institutional finances have started to creep in among this list of concerns. Other concerns, such as the demand for Ph.D.'s or the welfare of faculty, may or may not be included as part of the list.

While there is nothing wrong, and there can be a lot which is right, with a focused program of research oriented to a series of priorities (if the priorities are critically re-examined periodically), some new priorities are not examined

and old priorities are retained because important preliminary steps are skipped. The building of agendas requires more careful staff work than it has been accorded.

Detailed Review of Developments. The first of three steps in preparing agendas is the development of a statistical or factual overview of recent developments. For an agenda dealing with the finances of higher education, recent developments in the financial status of students, institutions, and faculties need to be examined. Such a survey ought to deal with trends in the enrollment and attainment of students by socio-economic class, and identify the part played by parents, students themselves, institutions, state, local and federal governments in paying for higher education. The pattern of student support by income level, race and sex should be identified, if such analysis is feasible. Second, the survey ought to describe trends in the costs and revenues of various types of institutions. Third, an analysis of the economic status of faculties needs to be presented. It is my contention that such an examination will not only be useful to policy planners, but will also serve as a fertile generator of research hypotheses for a focused research program.

Choice of Appropriate Techniques. The second step which needs some attention is the review of appropriate approaches, and their relevance to the issues to be researched. As far as techniques are concerned, increased attention needs to be paid

to the promise of dynamic analysis. I shall illustrate this point by citing mobility studies, which have highlighted the serious deterioration of job prospects for persons with post-secondary education which were not documented by comparisons of snapshots for any two recent periods of occupation by education. While journals in most relevant social science disciplines are full of theoretical models for dynamic analysis, too few are translated into empirical research.

Other techniques also need attention. At one time, the NIE was optimistic about production functions and input-output analysis. These two approaches seem to have gone out of fashion. Both techniques have relevance to financial analysis, and some summary of findings of what NIE found out (or failed to find out) from its past funding does not seem inappropriate.

Examination of Data Bases. The third step in improving agendas is more attention to availability and limitations of current data bases. There is an aura of unwarranted optimism that data bases can be listed, described, and used with no manipulation or editing. This is just not true. In the first place, most data bases collected by a variety of agencies are generally not suitable to answer the questions raised by a programmatic agenda. Sometimes, if one is lucky, by combining a variety of sources one can produce an amalgam which will "do for" the ideal data base. These amalgams are not easy to

produce. Some data bases are less reliable than others, and unless a great deal of money (and effort) is spent on editing and comparing the results obtained from a variety of sources, misleading analyses are likely to be produced. Researchers with hands-on experience know of many of these pitfalls. Research assistants, hired by the lowest bidder to prepare data base compilations and descriptions, do not.

Let me cite just two instances to illustrate the difficulties which are likely to confront researchers laboring in the mine-field of educational finance research. First, the OCR/NCES tapes of enrollments and degrees granted to minorities have never been compared to CPS or HEGIS tapes to check the correspondence of estimates of one source with another. Second, HEGIS finance tapes, which are supposed to report outlays on a campus-by-campus basis, consist of reports for selected campuses, and data allocated from system-wide data for a large number of locations of state-wide systems. The allocation methods are not documented and are not consistent from year to year. Without substantial editing, year-to-year comparisons may be extremely misleading.

As long as we are discussing data problems, I would like to mention the advisability to plan ahead, as new data bases come on-stream. The most important such data base is the U.S. Census of 1980, which, the courts and the Bureau willing, ought to be available within a couple of years. The

format of the 1980 census is not unlike that of the 1970 census, hence some ideas about the possible analyses and comparisons could be started right now. If my premonitions are correct, the planning for special extracts of Census tapes limited to persons with some postsecondary education or training may be quite timely.

An Iterative Approach to Agendas. If I were in charge of putting together a research program, I would first produce a paper on current trends, identify the techniques I wanted to use to illustrate the issues in research agenda, and then examine the available data sources which were likely to be used in the analysis. If some data were not available, I would try to estimate what it would cost me in money and time to develop them. With these new insights about costs, I would revise my agenda. I would be very careful about sponsoring new data collections. Sometimes, because projects are inter-related, and some parts of the agenda become less interesting, other parts appear too costly so that stand-alone efforts will be abandoned. A number of iterations become necessary before a final agenda is prepared.

This approach is very different from the one adopted by most government agencies and implied by the research plan which forms the basis of the Wye Conference. The usual process is to catalog all our concerns, invite the mass of researchers to throw pebbles down a well, and have an anonymous review

committee, dominated by non-researchers, recommend funding of the projects which have made the most mellifluous noises as they hit the water.

Somewhere there has been a learning failure. First, agencies have not learned that asking for bids for an impossible, but interesting, project will result in a product which would not pass FTC scrutiny for truth in advertising. What starts out as a design competition for a silk purse ends up as a custom operation producing sows' ears. Second, agencies have refused to internalize the simple fact that it is expensive to use large data bases well, especially if care is taken to edit them. A small grant, under $20,000, can produce a trivial statistical analysis, a compilation of traditional wisdom. On a few lucky occasions, an interesting theoretical paper offering new insights about what has happened or is likely to happen may be produced for this sum. A thorough, up-to-date analysis must cost more. An imaginative testing of hypotheses must cost much more.

Since we do have certain rules about project monitors being responsible for n projects, the NIE system is oriented to dispensing numerous small grants. This will continue, unless the original concept for NIE is reinstituted--project monitors should not monitor projects unless they are actively engaged in research in the field of the procurement. Since they will be actively engaged in research, their employment can be justified

even if the number of projects they monitor is reduced.

Historians study the past in order to better understand the future. Educational researchers should take this attitude to heart. There are only two reasons to fund research: one is to develop new techniques (and, with luck, new insights), and the second is to analyze past developments as they are likely to relate to the future. (I have purposely put insights low on my funding priorities because, unlike a light bulb, one cannot command somebody to turn on a new insight. On the other hand, if I were in charge of handing out money, I would favor researchers who produce non-routine analyses.) In the final analysis, a judgement has to be made about the type of studies which will contribute to (1) anticipating future developments which may affect the functioning of the postsecondary sector, (2) shaping government policy, and (3) improving the practice of financial planning or management. A viable agenda would deal with all these types. An agenda to disburse limited funds should choose its priorities more carefully.

SHAPING THE AGENDA IN THE LIGHT OF FUTURE DEVELOPMENTS

Let me thus move on to the topic which is more central to the formulation of research agendas, making them relevant to tomorrow's problems. The German professor who stated that forecasting is very difficult--especially about the future--was only half right. Certain events are easy to forecast, and generally describe a future which we may not wish to face. In

my case, during the mid-1960's, it took more courage than intelligence to point out the inevitable surplus of elementary and secondary teachers during the next decade, or again during the early 1970's that college faculty wages were going to deteriorate in relation to the wages of other professionals.

The Market for College Graduates. Throughout the 1980's and 1990's, an increasing proportion of college graduates are likely to experience difficulties in landing "good" jobs. Even if one disagrees about the way the economy is likely to shape up, this conclusion is inescapable. I have a favorite scenario (note that I weasel and do not call this either a projection or forecast) which may be fashionably dubbed as "reindustrialization."[1] If this scenario describes the future accurately, much of the employment growth is likely to take place in industries with a low proportion of the jobs in professional and management categories which are favored by college graduates.

Other alternative scenarios can also be imagined. If productivity per worker returns to its postwar highs, it is quite possible that (1) the demand for goods and services will be soon saturated, and high levels of unemployment will ensue. We should not spend too much time on this scenario. We know enough about fiscal policy to control unemployment, if not inflation. In the long run, employment concerns win out over inflation every time. (2) Or, perhaps, government can take,

once again, a leading role in reallocating income or alternatively laying a large claim to the growing Gross National Product. This second alternative may result in employment growth in industries where suitable jobs for college graduates make up a higher proportion of total employment. If government funds are channelled into human resource development again, rapid growth in the caring industries as well as the bureaucracy would open up more suitable jobs for those with postsecondary training. If, on the other hand, the "social dividend" is spent for rearmament, we are back to the reindustrialization scenario.

In either event, the number of persons with some college or four years of college will exceed the number of jobs usually believed to be suitable for persons with this level of education. What remains uncertain, depending on the social policy likely to be followed in the next 10-20 years, is how many persons are likely to be underemployed. By 1990, at best two in twenty, and at worst five in twenty college graduates will fill jobs not believed "suitable" for college graduates in 1970.[2]

The deterioration in the quality of employment opportunities can be observed more accurately by looking at new job entrants and movement between occupations in different time periods. When one compares the period 1960-1970 to 1970-1975, young male college graduates were certainly less favored during

the later time period.[3] While roughly three-quarters of them obtained higher-paying jobs during the earlier period, only half managed to do as well in the later time period. In the case of women college graduates, after adjusting for the general lower level of wages, the proportion of those in higher-paying jobs declined a little bit less, with four out of five starting their careers in the higher-paying jobs in the earlier time period and two out of three in the later time period.

The glut affected males with less than four years of college education even more seriously than colleged-educated males. The proportion of younger males with some college entering good jobs declined somewhat, and real barriers to mobility occurred for persons with less than four years of college aged 25 to 29, who used to move into higher-paying positions at that age. Better-paying, more attractive jobs are also becoming scarcer for women who have not completed college. Past age 30, women, presumably re-entering the labor force, were much less likely to find good jobs in the 1970-1975 period than the decade of the 1960's.

It is unfortunate that we do not have any additional information on mobility during the 1975 to 1980 period. Research on this subject today is probably inadvisable since the complete Census data will be released in the next two or three years, and it would be imprudent for researchers to publish results based on the less reliable information from the Current

Population Survey.

Nevertheless, certain conclusions can be drawn from the fragmented data available today. Persons with college degrees are starting their careers in less attractive occupations. Persons who had attended but not completed college were already pushed out of these attractive careers between 1970 and 1975. While in the 1960's it was still possible for them to aspire to better jobs as they got older, by the 1970's they were being blocked in their promotional opportunities by younger and more educated workers.

For both college graduates and those with less than four years of college, median and average wages for each sex, occupation, and age group are lagging behind the average growth in money wages for the non-collegiate population.[4] This occurrence is not surprising because the quality of the jobs has declined.

The Impact of Future Jobs Prospects on Enrollment. How will the relative decline in college graduates' advantage in the labor market influence their propensity to continue education beyond high school? This question cannot be answered without determining the extent of this loss and evaluating the influence of other factors which motivate students to seek more education.

There is little doubt that the majority of college graduates will continue to "cream" the best openings in the

labor market. (It would be interesting to trace, using the 1980 census data, if college graduates outside of "suitable" jobs have higher earnings than persons with less education.) There is substantial agreement about the track record of college graduates in winning good jobs, and less agreement about the reason for their success. Some explain this phenomenon as a vindication of the human capital hypothesis, others ascribe it to screening. The tests of these competing theories have failed to convince either side, and unless an absolutely new, brilliant approach is proposed and this approach is recognized by civil servants who hold the purse strings, I do not believe that research in this area will break much new ground.

In order to forecast the future level of salaries for persons with postsecondary education in the increasingly competitive labor market for college graduates, attention will have to be paid to (1) the increasing competition for professional and managerial jobs between women and men, and (2) the impact of the supply of recent college graduates upon the promotion opportunities of persons with lesser attainment or older college graduates.

According to BLS statistics, by 1979 women over age 25 with a college education were making serious inroads into professional and managerial occupations. During the 1970's despite a disastrously tight market in teaching, library jobs, and nursing, which were the traditional jobs for female college

graduates, the rate of growth of college-educated women among managers and professionals exceeded that of men.[5]

If certain professions become staffed predominantly by females, it may be instructive to trace whether the relative wages in these occupations will decline in relative terms, as they have in the past when females started dominating a formerly male occupation (say high school teaching) and lowered pay levels for both sexes. Alternatively, if females compete effectively for jobs in all occupations, what effect will they have on all professional wages, and especially on wages of college graduates?

There are two interesting issues which ought to be discussed in that connection. One is the adjustment of the better-educated workers to lower career goals and to longer periods spent in pre professional or routine occupations. While some have argued that education makes for a happy and well-rounded person, fragmentary evidence, mostly related to under-employed college-educated women, indicates that recipients of bachelor's degrees were less satisfied than those with less education.[6] There are also signs that we are developing a new sub-culture where young college graduates, many of them with post-graduate degrees, separate their activity in the world of work from their intellectual life. I have heard of a group of Ivy League college graduates in the Washington area who work in routine jobs but meet together during the weekend and conduct

a small archeological dig for Indian artifacts. In conversations, they refer to themselves as archeologists rather than court marshals, clerk-typists, or administrative assistants.

The extent to which a satisfactory adjustment to lower-status jobs is likely to be achieved by the majority of college graduates remains to be seen. While we are seeking to retrain persons with doctorates in the humanities to make them as acceptable in the labor market as persons who have graduated from business college, there are some who do not believe that aspirations to a life dedicated to scholarship can be traded in for a low-level supervisory job in an office without regret. One of the great qualities of Americans is that they are optimistic, especially about the ability of others to adjust to misfortune. Policy analysts who are concerned with public and private returns to education may not share this point of view.

Some idea of future conditions in the job market is essential to formulating a realistic hypothesis about the propensity of students to enroll, subsumed in the plan under the heading of student decision-making. I would like to argue that anticipated earnings are not the sole determinant of reasons why students enroll. The opportunity to compete for better jobs, not necessarily better paid, may also be a powerful incentive.

If those who fail to graduate learn that they can

aspire to neither, will "high risk" students stop enrolling? Increasing attention should be paid to the behavior of students likely to graduate and to those who may not. Patterns of attendance by socio-economic group, ability group, and race vary very considerably,[7] and these patterns have considerable influence upon the chances of completion of an undergraduate degree. We shall know more about this if and when the latest follow-up of the high school class of 1972 is analyzed.

If some of my colleagues' research is correct, in a number of instances enrollment in postsecondary institutions is governed not only by the prospect of economic returns, but also by the presence of certain job openings in the labor market where the student is working.[8] Conversely, if there are no jobs to be had, a Pell grant may be used as a substitute for unemployment insurance. In certain circumstances, the demand for postsecondary education may be U-shaped.

The effect of alternative employment opportunities on the choice to enroll full- or part-time needs increasing attention. As a higher proportion of students enroll part-time, the conventional wisdom about returns to education may be no longer applicable. Thus, as long as over half of the students are enrolled full-time and work only part-year or part-time, the median investment in education will have to include foregone incomes of these students. For some students, who acquire a year of credentials through part-time study and forego much

less income, the investment may be less, and even modest returns may appear to be quite substantial.

I am not sure that the propensity of students to enroll in college will remain unchanged in the next ten or twenty years. During an inflationary period, there is considerable difficulty in finding safe havens for investment. Human capital may be a better inflation hedge than most, and under these circumstances, a small positive rate of return may be sufficient.

The Effect of Tuition Levels on Enrollment. Somewhat lower on my priorities is the emphasis in the plan on price, especially if one limits it to an examination of tuition. With scholarship aid, loans, and foregone earnings playing such a large part in the investment decision, and the information on these items so scarce, it is not at all clear that focusing on tuition levels is right. To an economist, the net price is more important than the posted price. Unless proof positive can be adduced that gross prices affect students' propensity to enroll, such studies are not likely to prove very useful. Studies of net prices will have to await the invention of a new technology to ascertain them, and the building of a data base which will measure this effect upon both choice of institutions and decisions to enroll.

Because the three years I spent at the University of Chicago have imprinted me with a concern for estimating marginal costs and benefits, I would be interested in (1) comparing

the benefits of obtaining a bachelor's or advanced degree through part-time study to those of a bachelor's degree awarded after four years of full-time attendance, and (2) examining the elasticity of demand for postsecondary education, given different arrangements by students to finance both their education and living expenses. It is my contention that the cost of a college credit obtained through part-time study is very low. Finding out its effect on incomes is likely to be difficult, and thus would earn a low priority rating in an agenda for a parsimonious research program.

Rates of Return on Education. I can think of a large number of reasons to de-emphasize research on rates of return on education. Public opinion about the desirability of higher education would have to change drastically before rates of return calculations are likely to affect higher education policy.

Further, the lack of certainty about the future differences between the wages of college graduates, persons with some college, and high school graduates may make most estimates of rates of return inaccurate and misleading. If one feels that forecasts of rates of return are important, then one should start sponsoring research on the effect of the increasing proportion of college-educated persons in the labor force on this group's earnings. This research was described above.

Attempting to calculate both social and private rates of return by occupation is also relatively low on my scale of

priorities. With the exception of medical doctors, who generally start and end their careers in the medical field, the great majority of persons with some college and of college graduates do not necessarily pursue careers directly related to their majors. The process of tracing careers by college major is horrendous. Estimating the costs incurred by major for each different discipline is more difficult still. The limited resources of NIE should probably not be committed to this topic.

To summarize, rates of return calculations have provided a springboard for more articles than one can count. Simple rate of return calculations probably will continue to be published whether NIE support is available or it is not. The more complex ones will need the development of expensive data bases. In my opinion, a little speculative work on the topic is worth subsidizing, but no major effort is warranted.

The States and Education.

Student Support. State policy, a topic which spans support to students and support to institutions, is part of the agenda. The least interesting part of the policy relates to students. A quick look at appropriations by states to post-secondary education will convince even the most skeptical that the bulk of the money is spent on support of institutions. A handful of states provide the bulk of scholarship support to students, but these amounts are dwarfed by federal contributions for this purpose.

Surveys of student aid programs were financed by the Department of Education. The studies conducted by ECS and the National Center for Higher Education Management Systems resulted in three reports currently available from the Office of Planning, Division of Postsecondary Education. Probably more has been said on this topic than it deserves.

Support of Institutions. By contrast, much less analysis was generated in the course of the past decade on the determinants of state support to postsecondary education and, especially, the allocation of this support between institutions. There is very little documentation about the logic of the ground rules for support of state universities (especially flagship schools), state colleges and two-year schools. This reticence is understandable, since so much of the state appropriations process is political and indigenous to every state. A gem of a case-study on this topic is by Millet, Politics and Higher Education.

Admirers of Millet will not be optimistic about the ability of statistical models to explain the level of state allocations for higher education. They believe that economic determinism plays only a small part in this process. In the overall context of state budgets, moneys to higher education do not constitute a very big slice, and the budgets of colleges and universities, again if Millet is to be trusted, are treated as residual special interest legislation. Under these

circumstances, both efforts to quantify the common influences which determine higher education budgets and rules used to allocate them are likely to produce disappointing results.

Managing Decline. A topic dealing with state financing is high on my priority list: a review of alternative ways of coping with enrollment declines in state networks of higher education. This effort would not limit itself to an attempt to estimate the cost of keeping all campuses operating, a suggestion made in the current plan, but would try to evaluate alternative schemes of operating both smaller networks, with fewer campuses, or networks with satellite campuses with strictly limited offerings.

The reason for championing these studies is that the right policy is not obvious. Two different considerations tend one to draw opposite conclusions. Subsidies to all campuses, including those where enrollment is declining, may weaken stronger campuses by allowing less desirable institutions to retain enrollment which would otherwise flow to these campuses. This would argue for reducing the size of state networks. On the other hand, the costs of allowing the fittest to survive have not been reckoned in terms of access, especially for part-time students, and these costs must be reckoned. I would propose that studies of retrenchment policies by "catchment areas," similar to those conducted in the medical field, may be most appropriate. It would be most useful if some pilot efforts

were financed to test whether the suggestion makes sense.

Unfortunately, such studies may fail to influence decisions to support or close institutions with declining enrollments, and less rational but more potent political considerations may continue to govern the allocation process. For this reason, sufficient resources must be allocated to both research and dissemination, so that a blow may be struck for rationality.

INSTITUTIONAL FINANCES

The effects on institutional finances of inflation, low-growth and taxpayer revolts should be documented in the introductory survey of financial developments in higher education. The research agenda itself ought to concentrate upon the more detailed adjustments which are likely to take place if enrollments decline or real expenditures per student fail to rise. The reactions and policies of institutions that are faced with a shrinking or, at best, stable resource base will vary institution by institution.

Study of a System. An instructive case study of the way a system coped with declining enrollments and shrinking resources can be written about the CUNY system. Even more interesting is the current travail of this system in (1) relocating resources to follow the changing interests of students, and (2) keeping faculty tenure appointments down, so as to remain flexible in the face of further enrollment declines.

The allocation of resources and other administrative measures to equalize the impact of stable enrollments between campuses may also deserve some examination in such states as California. The competition between state campuses with excess capacity is just as real when enrollments are stable as when they decline.

I am afraid that the techniques of cutting down and controlling expenses vary a great deal from institution to institution, and lists of "good ideas" are probably less useful than one would expect. Every state system differs from other state systems, and each institution in state systems tries to structure itself in such a way as to maximize its comparative advantage vis-a-vis other institutions.

Research on this topic is likely to be difficult because of the way higher education keeps its financial records. In both public and private institutions, the bookkeeping is idiosyncratic and, what is more, the peculiarities are well entrenched either because state regulations differ, in the case of public institutions, or trustees and administrators in private institutions march to their own drummers.

Record-Keeping and Management. The lack of success of federally-sponsored efforts to influence the record-keeping and management techniques of higher education institutions is a matter of record. New and free approaches to better ways of keeping records have been distributed to many higher education

institutions. The rule of thumb in business for this type of offer is between three and four percent acceptance by the target population. At last count, some thirty institutions were reported to have adopted some or all of these recommendations. Thus, this activity does not sound promising.

Financial Implications of Change on Institutions. I would advocate that studies of financial concerns be integrated with broader-based studies of the functions of institutions. I am especially concerned about the alternatives open to research universities, and will use these issues as an illustration of the type of study I have in mind.

The financial and organizational implications of three recent developments now affecting the nation's leading research universities need to be investigated, and solutions to the problems caused by these developments suggested.

The first development is a shift in the majors chosen by undergraduate students. As college graduates increasingly compete against each other for a shrinking number of good jobs, fewer students are opting for traditional majors in the humanities and the soft social sciences. Instead, growing numbers of students are enrolling in programs which will prepare them for entry to professional schools.

Secondly, graduate applications and enrollments in the leading research universities are declining. These institutions traditionally grant doctorates to persons aspiring

to careers in teaching and basic research. Few jobs are opening up in these fields, and the benefits to be derived from pursuing such programs are increasingly uncertain. At the same time, government support for doctoral and post-doctoral positions is shrinking. Thus the costs to students of pursuing intensive, high-cost doctoral programs in the research universities have escalated just as the attraction of these programs has plummeted.

Thirdly, outlays for research and development are not growing in real terms. This has caused entry-level jobs in research institutes to become scarcer and scarcer. Unless the research institutes that are connected with universities find new sources of funding, not only will the number of research jobs in exciting environments be drastically reduced, but, equally importantly, research in the universities may lose its vigor because no "new blood" is added.

The leading research universities are particularly vulnerable to these three developments, and will have exceptional difficulty in dealing with them, for they are committed to their specific mission more solidly than the average postsecondary school. With the exception of leading science/engineering schools, the research universities insist on offering well-rounded programs, stressing excellence in the humanities, history and social sciences, as well as in the physical sciences.

A study should investigate how the leading research

universities are geared to dealing with the changes and the implications of these changes on their financial viability. The theme of this analysis, suggested by some of the early work of Peter Drucker, is that the success of an institution depends on its ability to anticipate the requirements of the society in which it operates...

The questions raised about the universities' organization, governance and finances need to be answered in the new context, as institutions of higher learning are now facing many of the problems of middle age. After a phase of rapid expansion during the 1950's and 1960's, a period of slow or no growth beginning in 1970 put these institutions on notice that their operating style had to change. The realization that their resources had stopped growing came as a shock to a large number of college and university administrators.

Their reactions to the new, more stringent, circumstances were documented by Cheit,[9] who concluded that an uneasy balance was struck between resources and aspirations during the 1970-72 period. Some programs were abandoned, others were curbed, and few new programs were undertaken by institutions of higher learning. A respectable, and relatively satisfactory, level of activity was maintained by most institutions, which took measures to bring expenditures in balance with resources.

Cheit's findings are encouraging to some and frightening to others. On the optimistic side, they document the

ability of higher educaton institutions to adjust to changing conditions. The pessimists read his findings as a diagnosis of higher education's hardening of the arteries.

I believe that studies of possible scenarios showing the effects of various levels of financial resources on the operating styles of universities are likely to be seminal in pointing the way to a more rational reorganization of the higher education sector.

THE IMPACT OF STABILITY OR DECLINE ON FACULTIES

The effect of stability in and the attendant penury on faculty recruitment patterns and the compensation of faculty deserves a place in the agenda. I have no axe to grind, and will just note the 18.4 decline in full professors' real wages which Lee Hansen claims has occurred between 1969/70 and 1979/80.[10] It would be useful, though, to examine critically how lower earnings affect the supply of faculty. The effect of these developments on the process of appointment and career patterns of young academics has not been documented.

I wish to point out two additional areas of concern: (1) Will it be possible to recruit engineering, business or medical faculty if the deterioration in relative salaries continues? An analysis of supply and demand for persons with suitable credentials in these fields may yield surprising results, or perhaps lead one to suggest new arrangements in employment or compensation of faculty members in these fields.

(2) Will the dynamics of full-time faculty recruitment, especially in the humanities and, to some degree, in sciences, result by 1990 in bi-polar distributions by age of teachers in these disciplines? Should one be concerned about a generation of humanists and scientists lost to pure research and teaching? Should tenure be abolished to spread employment by age group?

Advocates of abolishing tenure should consider the added costs to institutions which this step may entail. It would be reasonable for faculty members to expect to be paid more if their future employment was no longer guaranteed.

An estimate of the costs of alternative compensation and employment patterns has not been prepared. I would put it high on my list of priorities.

CONCLUSION

If the National Institute of Education sees itself as a serious contributor to research activity which will help understand the process and outcome of higher education, the past election should not affect the content of its research agenda. A good research strategy is neither Republican nor Democratic, it focuses on relevant and researchable issues.

I am not unrealistic enough to contend that the new political mood will not affect the level of funding. The general consensus today is that as a result of the November election, not much new research money is likely to become available, and the continuing penury of educational research money will

become institutionalized. This penury ought to affect the scope and the timing of program activities, rather than their strategy.

I would not like to set a long-term agenda in concrete until the probable ranges of certain possible changes in the financial prospects of higher education are quantified. Since the strength of the financial fabric of higher education depends upon numerous strands, e.g., funds from student tuition and fees, public subsidies to both students and institutions, and the size of research budgets, the interaction between these different sources is not at all obvious. It may be either impossible or unrealistic to look at each strand individually. For example, public subsidies to institutions are sometimes tied to enrollment levels, and are sometimes in the form of block grants; the level of enrollments is probably influenced in the long run by the joint effects of (a) a social climate which puts a value on higher educational attainment, (b) the level of earnings of persons with higher education, (c) the value placed on working in higher-status, but not necessarily higher-paying, occupations, on the one hand, and (d) the net cost of education on the other.

A research program can contribute to a better understanding of each one of these factors, without contributing substantially to the formulation of action programs which will have to be introduced in the coming decade. By contrast, a

research program which would have a good chance to make such a contribution would sponsor more aggregative studies, based on reasonable assumptions, and would identify a range of relationships which play important roles in determining the financial viability of higher education.

If the first approach is picked, NIE must coordinate its work carefully with NSF, since the interest of the two organizations will overlap. If the second approach is chosen, care must be taken not to duplicate policy research of the Department. In both instances, a decision will have to be made about balancing the inquiry between projects which take as a point of departure modelling of student behavior, institutional response to financial incentives or fund availability, or government action. With limited funds, it is important to choose one approach or the other, and then sharpen the focus of the program to make sure that the projects which are chosen are both innovative and sound.

The strategy and tactics, to be effective, must be forward-looking. Only those analyses of the past which illuminate the future should be undertaken. Care must be taken that the program be focused, and funded adequately.

I hope this paper will assist NIE to produce "a pudding with a theme."

FOOTNOTES

[1]Joseph Froomkin, The Future Role of Vocational Education, National Institute of Education, November 1980.

[2]Joseph Froomkin, Supply and Demand for Persons with Post-secondary Education, EPRC for Higher Education and Society, October 1976.

[3]A. J. Jaffe and Joseph Froomkin, "Occupational Opportunities for College-Educated Workers, 1950-75," Monthly Labor Review, Vol. 101, No. 6 (June 1978).

[4]See U.S. Bureau of the Census, Current Population Reports, Series P-60, "Money Income of Families and Persons in the United States" for various dates.

[5]Anne McDougall Young, "Trends in Educational Attainment Among Workers in the 1970's," Monthly Labor Review, Vol. 103, No. 7 (July 1980), pp. 44-47.

[6]Job satisfaction is correlated as highly to income as to educational attainment. Of course, in the past, these two were highly intercorrelated. We thus face a chicken and egg problem, which is not dealt with in most recent writings dealing with the psychological benefits of education.

[7]David Selby and Joseph Froomkin, Participation in Postsecondary Education: An Outline Sketch, Department of Health, Education and Welfare, July 1979.

[8]David Selby, Short-Term Postsecondary Education and Work Four Years After High School, National Institute of Education, May 1980.

[9]Cheit, Earl F., The New Depression in Higher Education, McGraw Hill, New York, N.Y.: 1971.

Cheit, Earl F., The New Depression in Higher Education--Two Years Later, Carnegie Commission on Higher Education, Berkeley, California: 1973.

[10]W. Lee Hansen, "Regressing into the Eighties: Annual Report on the Economic Status of the Profession, 1979-80," Bulletin of the AAUP, Vol. 66, No. 5 (September 1980), pp. 260-274.